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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/847,634 | 05/02/2001 | Thomas A. Seeman | TIG-200-A | 6613 |

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WEINER & BURT, P.C.
P. O. BOX 186
HARRISVILLE, MI 48740

| EXAMINER |
|---|
| VINCENT, SEAN E |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1731 | |

DATE MAILED: 12/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-5

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/847,634 | SEEMAN ET AL. | |
| | Examiner | Art Unit | |
| | Sean E Vincent | 1731 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *30 September 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-10 and 13-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _ is/are allowed.

6)☒ Claim(s) *1-10 and 13-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-10 and 13-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Use of the term "MAPP gas" is indefinite because the actual composition of the gas is unknown. The applicant's lexicography suggests that MAPP is a hydrocarbon mixture of methylacetylene propadiene and propylene. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The Sittig's Handbook of Toxic and Hazardous Chemicals and Carcinogens ($4^{th}$ ed.) lists "MAPP gas" as one of several synonyms for methylacetylene/propadiene mixture whereas other synonyms are: allene-methyl acetylene mixture, propyne-allene mixture and propyne-propadiene mixture. Furthermore, it would appear that the prior art is replete with further synonyms such as "C-53 gas" or "MAPD gas" and the volume proportions of the hydrocarbon components in these mixtures can vary greatly so that a composition containing 90 volume percent "MAPP gas" and 10 volume percent propane is practically meaningless. This is especially true if propane is listed as a constituent of the MAPP gas synonym.

### *Claim Rejections - 35 USC § 102*

3. Claim 30 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Seeman (US 4498918). The features of applicant's claims can be found in col. 3, lines 3-8 and col. 3, line 44 to col. 4, line 30.

### *Claim Rejections - 35 USC § 103*

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-10 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virey (US Re. 34785).

6. Virey teaches methods of superstoichiometric combustion of hydrocarbons in flames preferably higher than 2500°K for the main purpose of glass mold lubrication (see col. 3, line 34 to col. 4, line 63). Virey does not teach the use of MAPP gas, per se. Mixtures of propyne and propadiene and further additions of propane are disclosed. It is the position of the examiner that the broad recitation of "MAPP gas" reads on the disclosed hydrocarbon mixtures of Virey.

7. Virey also anticipated other heat sources including plasma in col. 4, lines 22-26. Virey does not teach mold heating, per se. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to expect mold heating to occur in the process of Virey because the requirement for an oxygen-rich combustion in the flame and a minimum desired temperature suggested that mold heating would have been inherent in the mold lubrication process.

8. Virey does not teach mold heating prior to or during a production run. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to heat molds prior to or during a production run since mold lubrication was done during a production run and Virey taught preferred flame characteristics.

9. Claims 13-20 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virey in view of Eagle et al (US 5888266).

10. Virey does not teach changing the gas mixture while maintaining the flame to either inhibit or promote carbon skeleton formation. Eagle et al taught similar processes wherein carbon deposits were taught to be removed by adding methane to a gas mixture fitting applicant's description of MAPP gas (see example and col. 4, lines 44-55). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to change the mixture of Virey with natural gas because Eagle et al taught that a carbon deposit could be removed from a plunger by increasing the methane proportion in a MAPP gas mixture.

11. Virey et al does not disclose venturi mixers. Eagle et al taught similar processes using a venturi mixer (not shown) and a two way Humphrey valve (not shown). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the

venturi mixer of Eagle et al in the process of Virey et al because Eagle et al showed that it was a well known gas mixing means in the art of heating molds with combustible hydrocarbon gases.

***Response to Arguments***

12. Applicant's arguments filed September 30, 2002 have been fully considered but they are not persuasive.

13. In response to the argument that "MAPP" is definite because it is a registered trademark, the examiner disagrees. Trademarks can only be used to identify the source of goods, they cannot be used to identify the goods themselves. The word mark "MAPP" no. 0745630 identifies Dow Chemical as the registrant and Airco, Inc. as the last listed owner, but does not describe the composition of the gas. Since the term "MAPP" is used in the present claims to improperly denote a gas composition, the term is indefinite. See MPEP 2173.05(u). The only definition of MAPP gas in the applicant's specification was deleted in the most recent amendment from page 3, line 11.

14. In response to the argument that Seeman '918 does not disclose a MAPP and propane gas mixture as claimed, the examiner disagrees. The exact composition of MAPP gas was never defined by the applicant. Seeman '918 discloses methyl acetylene / propadiene mixed with methyl acetylene and describes methyl acetylene / propadiene as commercially available in a mixture containing methyl acetylene / propadiene, butane, propylene and propane. Seeman '918 also describes mixing 90 volume percent methyl acetylene / propadiene with 10 volume percent of a gas containing an acetylenic triple bond which can be allyene (which is also known as methyl acetylene). It is the position of the examiner that applicant's use of the term "MAPP" gas

broadens the scope of the gas composition indefinitely and that use of the term "approximately" broadens the range of addition of propane to the undefined gas. Therefore, claim 30 reads on the gas mixtures of Seeman '918.

15. In response to the argument that Virey et al does not disclose the claimed MAPP gas proportions, the examiner disagrees. The exact composition of MAPP gas was never defined by the applicant. Virey et al discloses gas mixtures of propyne, propadiene, propylene and other $C_3$ or $C_4$ hydrocarbons such as butadiene, butene and propane. It is the position of the examiner that applicant's use of the term "MAPP" gas broadens the scope of the gas composition indefinitely and that use of the term "approximately" broadens the range of addition of propane to the undefined gas. Therefore, the gas mixtures of claims 1-10 read on the Virey et al gas mixtures.

16. In response to the argument that Virey et al teaches away from the mold heating of claims 1-10, the examiner disagrees. While listing the disclosed details of Virey et al's process, the applicant fails to state which, if any, parts of the Virey et al process actually teach away from the present claims. In fact, the discussion on page 8, lines 8-19 appears to describe a mold heating process.

17. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

18. In response to the argument that the C-53 gas of Eagle et al is not 100% MAPP gas, the examiner disagrees. The exact composition of MAPP gas was never defined by the applicant. Eagle et al disclosed that C-53 gas was a mixture of methyl acetylene and propadiene, propylene, butane and propane. Eagle et al states that the composition of C-53 "has varied over the years." It is the position of the examiner that applicant's use of the term "MAPP" gas broadens the scope of the gas composition indefinitely and that use of the term "approximately" broadens the range of addition of propane to the undefined gas. Therefore, the mixtures of claims 13-20, read on the gas mixtures of Eagle et al.

19. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Eagle et al provides a suggestion to mix methane (natural gas) with C-53 gas (on which "MAPP" gas reads) to reduce or remove carbon deposits from glass contacting plungers during a heating process using a combustible hydrocarbon gas mixture. The logical conclusion which follows from this is that the degree of carbon deposition varies inversely with the methane proportion in the gas mixture.

***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

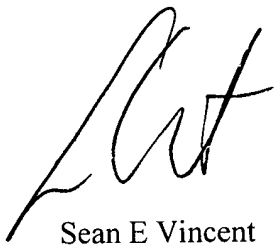
Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

21. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E Vincent whose telephone number is 703-305-3607. The examiner can normally be reached on M - F (8:30 - 6:00) Second Monday Off.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

24. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Sean E Vincent
Primary Examiner
Art Unit 1731

S Vincent
December 20, 2002